

REMARKS

1. Present Status of Patent Application

Upon entry of the amendments in this response, Claims 12-18 remain pending in the present application. More specifically, Claim 11 is amended. Claim 19 is canceled without prejudice, waiver, or disclaimer. These amendments are specifically described hereinafter. It is believed that the foregoing amendments and additions add no new matter to the present application. Applicants hereby respectfully request reconsideration of the application.

2. Response to Rejection of Claim 15 Under 35 U.S.C. § 112

In the Non-Final Office Action mailed on November 5, 2008, Claim 15 stands rejected under 35 U.S.C. § 112 as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner objected on the ground that the limitation “thermode” was not a limitation that would be known to a person having ordinary skill in the art.

Applicant respectfully traverses the rejection based upon the regular recurrent use of the term “thermode” in the art, making the term familiar to a person having ordinary skill in the art. A thermode is a bonding tool used in tape automated bonding (TAB) process. The thermode bonds through the use of a set of blades or bars that are pulse-heated. The thermode is used to hold component leads in place and reflow solder them to bonding pads on a substrate during hot bar reflow soldering.

TAB evolved from the miniMOD project begun at General Electric in 1965, and the term ‘Tape Automated Bonding’ was coined by Gerard Dehaine of Honeywell Bull in 1971. The first process used etched copper tape laminated to a sprocketed 35mm polyimide film and an automated reel-to-reel assembly system. The original TAB inner lead bonding (ILB) process was thermocompression gang bonding. The chip is placed beneath the window of a TAB tape, the bond pads are aligned with the lead fingers, and ultimately exploiting the thermode to apply heat (3–400°C) and pressure (15,000psi) simultaneously to all the leads, resulting in suitably soldered connection bonding leads to the substrate. An example of such use of a thermode is set forth in the

art as evidenced in US Patent No. 4,736,882 THERMODE DESIGN FOR TAB AND METHOD OF USE dated April 12, 1988.

As is clearly demonstrated by the history of the “thermode” itself and the much prior date of filing on the ‘882 patent, a person having ordinary skill in the art would have been well-familiar with the term “thermode” and what that term denoted. For that reason, the rejection based upon 35 U.S.C. §112 is not appropriate; the claims containing the term do point out and particularly claim what the applicant believes to be his invention.

3. Response to Rejection of Claims 11-16 and 18 Under 35 U.S.C. § 102(b)

In the Non-Final Office Action mailed on November 5, 2008, Claims 11-16 and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Green et al.* (U.S. Patent Application Publication No. 2003/0136503), hereinafter *Green*. Applicants respectfully traverse the rejection above for at least the following reasons:

a. Independent Claim 11

In Independent Claim 11 the specific limitations are:

- “a first device for outputting the at least one web material at a predefined speed;
- “a carrier belt for transporting the one or more transponder devices at the predefined speed;
- “a wedge-shaped device having a surface configured to deflect the carrier belt at the predefined speed in a direction to allow the release of the one or more transponder devices at a position defined by a section between the carrier belt and the at least one web material; and
- “a bonding device for bonding the one or more released transponder devices to the at least one web material at the predefined speed.”

In combination with each other, the limitations serve to regulate the speed of the web material, carrier belt, wedge-shaped device and bonding device at the predefined speed. That the transponder device is carried by the carrier belt over the wedge-shaped device to the web material at approximately the same speed and direction as the web material, itself, is traveling allows the continuous bonding of the transponders to the web material. Travel at a single

predefined speed by the four listed devices is a novel feature of the inventive device not taught by *Green*.

Independent Claim 11, as amended, is allowable for at least the reason that *Green* does not disclose, teach, or suggest that the relevant surfaces of the four listed devices of the apparatus travel at the predefined speed. As indicated in the discussion above, the limitation “predefined speed” connotes continuous movement of the four listed devices. *Green* discloses “An indexing device can be used to control the relative speed of the web that bears the ICs, relative to the web bearing the antenna, *so as to space individual IC's appropriately with respect to the antenna web.*” (Paragraph [0089], emphasis added). *Green* emphasizes the use of the carrier belt as a device for distributing the transponder devices on the web material at suitable intervals, thus the carrier belt is depositing transponder devices in accord with spacing implying a differential in speed between the web material and the carrier belt.

Green echoes the current practice of using the tape to bring the IC web and the antenna to a site for binding; stopping both the IC web and the antenna web for binding by the thermode and then drawing the bound IC and antenna bonded together and traveling away from the bonding site on the IC web. *Green* teaches away from a predefined speed because the indexing device is modifying the speed to space the IC's relative to the antenna. The speed of the IC web and the antenna web are not at the same predefined speed but, rather are selected for efficient movement of the antenna to the bonding site based upon the dimensions of the antenna.

Green also requires a cutting step further requiring a stopping of the web material. “Referring now to FIG.10, the RFID webstock 502 from the unwind 608 is *tensioned* and passed between the cutting die “D” and an anvil “A.” (Paragraph [0090], emphasis added). By accommodating the cutting using the die and anvil, *Green* indicates that *Green* is based upon this same stuttering movement, stopping to accommodate die cutting. *Green* teaches away from a single predefined speed by focusing on matching positions and spacing, again indicating the speed of the webstock will be changed in order to position the parts. Accordingly, *Green* does not anticipate Claim 11, and the rejection should be withdrawn.

b. Dependent Claims 12-16 and 18

Because independent Claim 11 is allowable over the cited art of record, dependent Claims 12-16 and 18 (which depend from independent Claim 11) are allowable as a matter of law for at

least the reason that these dependent Claims 12-16 and 18 contain all limitations of independent Claim 11. Accordingly, the rejection to these claims should be withdrawn.

4. Response to Rejection of Claim 17 Under 35 U.S.C. § 103

Claim 17 stands rejected under 35 U.S.C. § 103(a) as unpatentable over *Green et al.* (U.S. Patent Application Publication No. 2003/0136503), hereinafter *Green*. Applicants respectfully traverse the rejection above for at least the following reasons.

As stated with reference to 35 U.S.C. §102(b) above, Independent Claim 11, as amended, is allowable for at least the reason that *Green* does not disclose, teach, or suggest using a predefined speed for use by the significant devices of the apparatus. Also, because independent Claim 11 is allowable over the cited art of record, dependent Claim 17 (which depend from independent Claim 11) is allowable as a matter of law for at least the reason that this dependent Claim 17 contains all the limitations of Independent Claim 11. Accordingly, the rejection to this claim should be withdrawn.

In Independent Claim 11, as amended, the limitation was a predefined speed for use by the significant devices of the apparatus. In Claim 16, the specific limitations are “a plurality of carrier belts and corresponding bonding devices that are positioned at predefined locations relative to the at least one web material.” Claim 17 adds the limitation of “the plurality of carrier belts and corresponding bonding devices perform two or more different methods of fitting the transponder devices to the at least one web material.”

A fair reading of Claim 17 is that all of the above limitations are occurring simultaneously. The inventive device can simultaneously perform two or more distinct methods of fitting transponders devices so that distinct methods for fitting the web with different transponders at different positions can be carried out. Performing multiple, simultaneous and distinct methods to fit transponders is not obvious from *Green*.

Claim 17 is allowable for at least the reason that *Green* does not disclose, teach, or suggest using multiple, simultaneous and distinct methods to fit transponders. *Green* discloses different methods to fit transponders to a web; however none occur simultaneously. (Paragraph [0091]). *Green* also discloses “These lanes may be slit from the original RFID webstock, and optionally may be spread apart prior to the vertical indexing apparatus” (Paragraph [0101]) and “The lanes of web that bears the sections must also be made to match the lateral (cross-web) pitch of the lanes of the

web bearing the labels and the antennas.” (Paragraph [0102]). *Green* teaches away from simultaneous operation of multiple transfer units because the transponders must be separated and spread apart to be released from the web stock and further be aligned to match the pitch of the label and antenna webs. Accordingly, the rejection to this claim should be withdrawn.

5. Response to Rejection of Claim 19 Under 35 U.S.C. § 103

Claim 19 stands rejected under 35 U.S.C. § 103(a) as unpatentable over *Green et al.* (U.S. Patent Application Publication No. 2003/0136503), hereinafter *Green*, in view of *Fox et al.* (U.S. Patent No. 6,280,544), hereinafter *Fox*. Applicants respectfully traverse the rejection above for at least the following reasons.

As stated with regard to 35 U.S.C. §102(b) above, Independent Claim 11 is allowable for at least the reason that *Green* does not disclose, teach, or suggest using a predefined speed for use by the significant devices of the apparatus. One of the specific limitations of Claim 11 is:

“a wedge-shaped device having a surface configured to deflect the carrier belt at the predefined speed in a direction to allow the release of the one or more transponder devices at a position defined by a section between the carrier belt and the at least one web material”.

A fair reading of Claim 11 is that all of the limitations of the significant devices of the apparatus are occurring simultaneously, while utilizing a wedge-shaped device to release the transponder devices. The inventive device can continuously release the transponder devices necessary to form the radio frequency transponder identification devices. *Green* does not disclose utilizing a wedge-shaped device for any purpose.

As *Green* does not disclose using the wedge-shaped device to supply transponder devices at the predetermined speed, *Fox* cannot be relied upon to supply that limitation. *Fox* does not teach movement at a continuous predefined speed to facilitate continuous bonding. *Fox* only continues to promulgate the stuttered “die and anvil cutting” process, expanded only by the use a wedge-shaped device.

An additional reason exists for finding that *Fox* is not a suitable reference for rejecting Claim 11. *Fox* adds a limitation not present in the instant claim. *Fox* discloses using a printer housing 4 in the process of separating the printed labels from the web material (See Fig. 2 and Column 6, Lines 42-53). By choosing to include a printer housing in the process of separating the

printed labels from the liner, we must assume the printer housing provides a function. *Fox* teaches away from relying only on a surface of the wedge-shaped device and the corresponding section to release the transponder devices, which means Claim 11 is patentably distinct.

Accordingly, the proposed combination of *Green* in view of *Fox*, does not disclose, teach, or suggest the claimed limitations of a predefined speed utilizing a wedge-shaped device as recited in Claim 11. Therefore, a *prima facie* case establishing an obviousness rejection under the proposed combination of *Green* in view of *Fox* has not been made. Thus, Claim 11 is not obvious under the proposed combination of *Green* in view of *Fox* and the rejection should be withdrawn.

6. Conclusion

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending Claims 11-18 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at 206.903.1800.

Respectfully submitted,


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